# Common Operational Picture

# Version Description Document

COP Version 1.0.1.0 for GCCS Version 2.2

25 November 1996

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COP VDD

# Table of Contents

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# 1.0 System Overview

The Common Operational Picture (COP) is a software application for the Global Command and Control System (GCCS) Version 2.2 on Unified Build (UB) Version 3.0.1.6G. The COP allows the near real-time exchange of track data between participating nodes on a wide area network (WAN) and/or a local area network (LAN). The COP segment is one segment within the COP software application. The COP Segment can be installed on either a Tactical Advanced Computer (TAC) running HP-UX™ Version 9.0.7 or a SPARC® computer running Solaris™ Version 2.3.

# 2.0 Referenced Documents

The following document is referenced in this VDD:

- Common Operational Picture Software User's Guide, COP Segment Version 1.0.1.0 for GCCS Version 2.2, 25 November 1996.

# 3.0 Version Description

The following subsections describe COP Version 1.0.1.0.

## 3.1 Inventory of Materials Released

The following physical media and associated documentation make up COP Version 1.0.1.0:

- One digital audio tape (DAT) labelled "COP 1.0.1.0 Segment Software for GCCS 2.2, 4mm Cartridge, TAC UNIX - HPUX 9.0.7, November 25, 1996."
- One DAT labelled "COP 1.0.1.0 Segment Software for GCCS 2.2, 8mm Cartridge, SPARC UNIX - Solaris 2.3, November 25, 1996."
- Common Operational Picture Software User's Guide, COP Segment Version 1.0.1.0 for GCCS Version 2.2, 25 November 1996.
- Common Operational Picture Version Description Document, COP Segment Version 1.0.1.0 for GCCS Version 2.2, 25 November 1996.

## 3.2 Software Changes

Version 1.0.1.0 is the initial release of the COP software segment. This release ports the COP segment from the Joint Warrior Interoperability Demonstration 1996 (JWID96) into GCCS Version 2.2. The development of COP Version 1.0.1.0 occurred as follows:

- Version 1.0.0.0 of COP provided reliable data transfer across low and high bandwidth connections; provided UID correlation of ELINT tracks; and corrected the transmission of specialty Link tracks such as Missile, PLRS, and EPLRS tracks.

- Version 1.0.1.0 corrected the following two problems to prevent data ringing: the handling of acoustic sensor data and the processing of Delete Track management messages.

# 4.0 Installation Instructions

For instructions on installing COP Version 1.0.1.0, see the Common Operational Picture Software User's Guide, COP Segment Version 1.0.1.0 for GCCS Version 2.2.

# 5.0 Known Problems and Errors

1. Manually updating the motion model field of a track does not cause an update to be sent throughout the COP network.

2. Associations and disassociations are not handled correctly in COP. More specifically, associations and disassociations are not distributed over COP at the time of creation but upon the next update to one of the tracks.

   It is recommended as a Standard Operating Procedure (SOP) that associations only be performed on tracks that a node "owns" (i.e., contains UIDs matching the trigraph of the workstation).

   The following are some specific anomalies with associations, disassociations, and Nu-Trk operations:

   a. Broken ELINT associations do not get distributed throughout the COP network properly. Locally, the association is broken. However, the disassociation is not propagated throughout the COP network.

   b. Nu-Tracking a link, acoustic, or ELINT track that is not owned by the local host does not get propagated correctly throughout the COP network. The track appears locally as a platform, with the respective link, acoustic, or ELINT associated to it. The other COP nodes see the platform as a separate, unassociated track to the respective link, acoustic, or ELINT. Nu-Tracking a link, acoustic, or ELINT that the local host does own is propagated correctly throughout the COP network.

   c. When an ambiguity is Nu-Tracked, the new track is sent via COP and is received as forced ambiguity (NAME) at the other nodes. If the track is then modified to include more information, another track is sent to the other nodes. This non-ambiguous track has the same UID as the first track. If the user attempts to merge these two tracks, both are deleted.

   d. If a Nu-Tracked contact is updated on TopCop, another ambiguity on the child is created. The UID of the new ambiguity is a duplicate of the ambiguity created prior to the Nu-Track update. If any of the ambiguities are deleted on the child, the Nu-Tracked contact on the TopCop is deleted as well, leaving the other ambiguities on the child with the same UID.

   e. Deleting a platform track with an associated track does not work properly. Upon deletion of this type of platform track, user is prompted: "Break Association?". If user selects "Yes", then the platform is deleted; but the associated track remains. The platform deletion is distributed throughout the COP network, but it does not

delete the platform track. It only breaks the association. Since the platform track remains, it is then distributed back through COP, back to the node that originally deleted the platform. Hence to the user on the original COP node (the node deleting the platform track by hand), the platform is removed and then reappears.

f. Acoustic track associations are not distributed via COP. Additionally, to prevent acoustic track associations via COP, any data in a platform track's TRADEMARK field is not distributed by COP.

3. The EDIT MDXNET window does not validate invalid port numbers; i.e., any numerical values are assumed to be correct.

4. The EDIT MDXNET window will allow selection of MASTER NODE toggle with PARENT and LOCAL hosts set to different names.

5. When the EDIT MDXNET window displays DECODER=NONE and ENCODER=NONE, the channel can be activated without a warning message to indicate that no data will be transmitted or received. With these settings, the raw data window still shows the interface up, status and data messages being passed to the parent, which may lead user to believe the channel is properly configured when it is not.

6. Periodically, the warning of system times out of sync by > 60 seconds appears in the raw data window, even though the times are within 60 seconds.

7. HP only: When MDXNet is configured with DECODER=COPPROCESS and ENCODER=NONE, channel will not remain activated. When the channel is run by hand, the following error message is seen: “VMdxNetRcvNotify: GetServiceCmd RETURNED ERROR for fd 5.”

8. Search filter changes do not affect COP until MDXNet is restarted.

9. SPA25 Tracks are not sent over an MDXNet COP.